

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. Electric power unit for two-wheel vehicles comprising

- a batteries housing from which current is supplied to
- a DC magnetic motor that is connected to
- a controller assembly, and
- a chain transmission driven by said DC magnetic motor being adapted to actuate a driven wheel of a two-wheel vehicle that has a frame to which said electrical power unit for two-wheel vehicles is attached,

said batteries housing comprising a structure having

- means for forming two outwardly open compartments between which a hollow zone is interposed, each of said two outwardly open compartments being divided in several partitions, each of said several partitions being adaptable to receive one of several rechargeable batteries, said several rechargeable batteries having terminals for contacting a wiring; each of said two outwardly open compartments being provided with
- means for channeling air for heating said several rechargeable batteries, said means for channeling air for heating said several rechargeable batteries being located in said two outwardly open compartments, in and adjacent their walls, as follows: a) in a top and bottom walls and in a pair of second lateral walls, and open towards said several partitions, and b) adjacent a first lateral wall, for forming upper and lower passages;

said DC magnetic motor with speed control comprising, in combination,

- a stator including several alternating, equally spaced, permanent magnets that form a pair of parallel, concentric discs;

- a rotor including a central armature in a disc form, with two-loop windings and an even number of commuter segments, said commuter segments having odd ordinal numbers forming first loop windings, while said commuter segments having even ordinal numbers forming second loop windings; and
 - several brushes, disposed in a conventional holder that is concentrically affixed to said rotor,
half of said several brushes being used for starting said DC magnetic motor, while another half being used for regular functioning; and
- said controller assembly including
- a Central Processing Unit; and
 - means for starting, stopping and regulating a speed of said DC magnetic motor,
- said Central Processing Unit being connected to several sensors adaptable to be positioned to different parts of a two-wheel vehicle in order to detect various conditions and performances of the latter.

2. Electric power unit, as defined in claim1, wherein said means for starting, stopping and regulating a speed of said DC magnetic motor is a Pulse Width Modulator Motor Speed Controller.